

By Rhidian Jones SAC Consulting
Creep feeding spring born suckled calves

Why creep feed?

By the time a calf is 4 months of age half its feed requirement should be met by grass, silage or concentrates rather than milk. At this stage a calf will convert feed to liveweight more efficiently than at any other time in its life, so creep feeding to maximise weaning weights will be very cost effective.

- Weaning weights can be increased by around 25kg
- Lowers the weaning check through less stress from weaning – familiarise the calves to a different feed
- Reduced pneumonia after housing (biggest advantage)
- Efficient feed conversion ration – 4kg creep can provide 1kg gain

While creep feeding is important for calves moving onto intensive finishing systems, even cattle kept for later finishing or as replacements will benefit from a reduced weaning check and lowered risk of pneumonia after housing. Extra weight at weaning should be maintained through to turnout and eventual sale, with savings in feed and other finishing costs. Replacement heifers due to calve down at two years old also benefit, because they are more likely to meet the growth targets required.

Weaning is a stressful time for the suckled calf as not only does it lose the comfort of being with its mother, but it also loses one source of nutrients – milk. Supplying creep feed before weaning can help smooth the transition from pre- to post-weaning, and the extra source of nutrients can compensate for the reduction in milk yield as lactation progresses. When there is less stress at weaning there is a reduced incidence of pneumonia. Larger calves will also be less prone to diseases. A further advantage of creep feeding is that the weaning check is reduced because the calf is already familiar with concentrate feed and the rumen microbes are adapted for a change of diet.

Creep feeding is extremely efficient, owing to the calf's high potential growth rate. Since the rest of the calf's diet (ie milk and forage) already more than meets the requirement for maintenance, all the nutrients from the creep are used for growth. This means that the conversion of creep to liveweight gain is efficient at around 4kg feed/kg gain, and is economically worthwhile.

When to start creep feeding

Timing will depend on calf age, growth potential of calves and grass availability. Normally creep feeding would start 6-10 weeks prior to weaning, but bulls to be finished on *ad-lib* cereal diets should start being creep fed earlier, at around 12 weeks before weaning. With very milky cows or in situations where it is tricky to creep feed, starting 4-6 weeks before weaning will still help reduce the weaning check. As a rough guide allow 100-150kg of creep feed per calf for a 6-12 week creep feeding period.

If suckler cows are in poorer condition than normal this may limit milk production so creep feeding will improve calf performance and take pressure of the mothers. If grass supplies are limited then creep feeding will also improve the performance of the calves.

Creep feed does not reduce milk intake as milk bypasses the rumen and its digestion begins in the abomasum. However, with higher creep feed intakes, less grass is consumed. This leaves more grass available to the cows to help them regain condition.

Ideally creep feed should be introduced using troughs in an adjacent field (via a creep gate) to ensure all calves are eating concentrates before using an *ad lib* hopper. However this might be difficult in practice, so if using a hopper from the start you should try and make sure that all calves are eating and that some calves are not blocking the feeder, preventing access by others.

Composition of creep feeds

The creep feed should be around 16% crude protein (CP) and 12.5MJ Metabolisable Energy/kgDM. It should be palatable and kept fresh. As creep feed is usually made available from a feeder with a hopper it is effectively available *ad lib* so care is required to prevent rumen acidosis. Initially the creep feed should be diluted with a digestible fibre source such as sugar beet pulp, citrus pulp, wheatfeed or soya hulls which can be replaced gradually by sources of energy with higher starch contents. It is also advisable to start with a higher protein content (18-20% CP) as this will also reduce the risk of acidosis.

Cereals should only be lightly processed – the grain should be just cracked open. Whole oats are another option if available cheaply. A good quality protein source, such as soya bean meal is particularly useful as a source of undegradable protein. This will assist the transition to a weaned diet until there is enough microbial protein produced by the developed rumen.

Examples of simple creep mixes would be, 1/3 dark grains, 1/3 barley and 1/3 sugar beet pulp with beet pulp gradually reduced by half in favour of more cereals. Another option for a 16% CP creep blend would be, 57.5% barley, 25% beet pulp and 15% soya. Minerals should also be included at 2.5%.

If calves are introduced to creep early some producers have been successful in using higher levels of cereals as the calves have time to become accustomed to it. However if it is introduced later, then less high starch ingredients are required. The creep feeders should be kept topped up to avoid the calves overeating in one session if the feeder is allowed to become empty. To maximise intake feed must be clean and fresh, so check the trough and clean it out if necessary each time the hopper is filled.

Weaning

Once a calf is 200 days (6.5 months) of age 75% of its nutrition will be from sources other than milk and feeding the calf directly will be more efficient than feeding the cow to produce decreasing amounts of milk at the risk of her losing body condition as well. If cows are losing condition then calves should be weaned immediately and if they have been creep fed this will assist with the transition. After weaning, the calves should still be fed 1-2kg of the creep ration mixed in with the grower ration for a week or so to minimise any checks in growth rates. If you are selling creep fed calves at weaning then it is also a good idea to tell the buyers what they have been fed on so they can feed a similar concentrate post-sale.